

CLAIMS:

1. A higher-order moment-based image projection method comprising: when projecting three-dimensional data onto a projection plane,
 5 determining a pixel value at a point of intersection of a projection axis and the projection plane based on:

$$P = \left| \left(\sum_{i=1}^n Vi/n \right)^r - \sum_{i=1}^n (Vi/n)^r \right|^{1/r},$$

where the number of three-dimensional data values along said projection axis is denoted by n , a data value is denoted by Vi , and a real number greater than one
 10 is denoted by r .

2. The higher-order moment-based image projection method of claim 1, wherein $2 \leq r \leq 128$.

15 3. The higher-order moment-based image projection method of claim 1, wherein an operator is allowed to change r .

4. An image processing apparatus comprising: three-dimensional data storage means for storing three-dimensional data; projection direction specifying means for use by an operator to specify a projection direction; higher-order moment-based image projection means for determining a pixel value at a point of intersection of a projection axis and a projection plane based on:
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$$P = \left| \left(\sum_{i=1}^n Vi/n \right)^r - \sum_{i=1}^n (Vi/n)^r \right|^{1/r},$$

25 where the number of three-dimensional data values along said projection axis is denoted by n , a data value is denoted by Vi , and a real number greater than one

is denoted by r ; and projection image display means for displaying a projection image.

5. An image processing apparatus comprising: three-dimensional data storage means for storing three-dimensional data; projection direction specifying means for use by an operator to specify a projection direction; higher-order moment-based image projection means for determining a pixel value G at a point of intersection of a projection axis and a projection plane as:

$$G = \left\langle \left(\sum_{i=1}^n Vi/n \right)^r - \sum_{i=1}^n (Vi/n)^r \right\rangle^{\frac{1}{r}},$$

10 where the number of three-dimensional data values along said projection axis is denoted by n , a data value is denoted by Vi , and a real number greater than one is denoted by r ; and projection image display means for displaying a projection image.

15 6. The image processing apparatus of claim 4 or claim 5, wherein
 $2 \leq r \leq 128$.

7. The image processing apparatus of claim 4 or claim 5, further comprising: order specifying means for use by the operator to specify r .